## REMARKS

The present amendment is submitted in response to the Office Action mailed February 22, 2008. Claims 1-12 remain in this application. In view of the amendments above and the remarks to follow, reconsideration and allowance of this application are respectfully requested.

## ARRANGEMENT OF THE SPECIFICATION

In the Office Action, the Specification was objected to for failing to include section headings. Applicants respectfully decline to add headings as they are not required in accordance with MPEP §608.01(a).

## THE INVENTION

Prior to addressing the specific rejections of claims 1-12 in the Office Action, it is instructive to first briefly review the invention. The invention relates to a battery powered device for playback of a media title from a memory unit, the device comprising means for determining available battery energy and calculation means for calculating the energy required for the playback of a relatively large media title to the end, in relation to the available energy.

The invention further relates to a method for playback of a media title, comprising the steps of (1) retrieving the media title from a memory unit, (2) retrieving playback control information concerning the media title (3) determining available battery energy and (4) calculating the energy required for the playback of the media title to the end in

dependence on the retrieved playback control information and an energy consumption model.

It is well recognized that reading data, such as a media title, from a storage medium requires a lot of energy and therefore represents a significant drain on the battery life of a battery operated device. To determine the device's ability to play back a large media title to the end in relation to the available energy, the available battery energy must be determined (see method step 3 above) and an energy calculation must be performed to calculate the energy required to play back the media title to the end (see steps 2 and 4 above). The energy calculation takes into account both retrieved playback control information and an energy consumption model. Knowing the available battery energy and the energy required to play back the media title to the end, a determination can then be made regarding whether there is sufficient battery energy to play back the large media title to the end.

**35 USC § 101**

Claim 12 stands rejected under 35 U.S.C. § 101. The office takes the position that the claimed invention is directed to non-statutory subject matter on the basis that the claim is drawn to a computer program per se. In response, claim 12 has been appropriately amended to incorporate language which comports with the requirements of 35 USC § 101. Applicants respectfully submit that claim 12 is no longer directed to non-

statutory subject matter. Accordingly, it is respectfully requested that the rejection under 35 USC § 101 of claim 12 be withdrawn, and claim 12 be allowed.

**35 USC § 103**

Claims 1 – 12 were rejected under 35 U.S.C. §103 (a) as being obvious over Du et al., U.S. Patent No. 5,714,870, (hereinafter Du) in view of U.S. Patent Application No. 20030088326 to Dunston.

Applicants respectfully traverse the rejection of claims 1-12 under 35 U.S.C. §103(a). It is respectfully submitted that the cited references, individually and in combination, do not disclose or suggest Applicant's invention as recited by Independent Claims 1-12.

With respect to independent claims 1 and 11, the Examiner asserts that Du teaches most of the elements of independent claims 1 and 11. Specifically, in the Office Action the Examiner asserts that Du teaches: *a battery powered device (or method) for playback of a media title from a memory unit, the device comprising) for playback of a media title from a memory unit, the device comprising means (3) for determining available battery energy and calculation means (4) for calculating energy required for playback of the media title to the end in relation to the available battery energy, the memory unit comprising a storage medium (6) and reading means (7,8) for reading at least a part of the media title from the storage medium (6), the reading means (7,8) being arranged for retrieving playback control information (5) from the storage medium (6) concerning the media title and the calculation means (4) being arranged for calculating said required energy depending on the playback control information (5) and an energy consumption model of the device*

## I. Reading Means

The Examiner refers Applicants to page 3, paragraph [0032], lines 6-12 of Du for allegedly teaching the reading means: The Examiner places particular emphasis on the underlined and highlighted portion of paragraph 32 in support of the assertion that Du allegedly teaches reading means for reading at least a part of the media title from the storage medium (6).

> [0032] The mini-OS software is then copied from the HDD (2) to RAM (4), and then the first set of compressed files from the song play list is copied from the HDD (2) to the system RAM (4) also using the mini-OS software of the present invention. For example, in today's PC's 128 Mbytes is a typical system RAM size, with the mini-OS software of the present invention taking about 8 Mbytes of the **RAM, leaving approximately 120 Mbytes for use as a compressed music memory** (i.e., a cache or buffer, using system memory, dedicated memory, or other memory). That 120 Mbytes represents about 2 hours of continuous compressed music with a compression ration of 10:1, typical of MP3 files. Similarly, in the case when flash media is used for MP3 storage, all or most of the contents of the flash media card can be copied to the system RAM (4), thus minimizing the access of the flash media reader and allowing for a more responsive control over the MP3 files. [Emphasis Added]

Applicants respectfully point out that Du at paragraph 32 merely teaches that a portion of the RAM is dedicated to storing compressed music and that multimedia content can be transferred from one storage medium to another (i.e., the contents of a flash media card can be copied to system RAM (4)) to minimize access of the flash media reader to allow for a more responsive control over the MP3 files. There is no teaching or suggestion in Du of **reading means** for any intended purpose including reading the compressed music from RAM.

It is further noted that the Office Action fails to address the latter portion of this claim recitation which recites, reading means being arranged **for retrieving playback control information (5) from the storage medium (6) concerning the media title 11**.

While the Office Action does not explicitly address this claim limitation, Applicants respectfully submit that this claim limitation is not taught by Du. Du only teaches the retrieval of – (1) the next set of compressed music files, (2) audio data, and (3) voice data from system memory but is silent with respect to retrieving playback control information.

## II. Calculation Means

In support of the Examiner's position that Du teaches calculation means, the Examiner refers Applicants to page 3, paragraph [0038], lines 1-16 of Du:

> [0038] For example, with a 500 MHz Pentium III CPU having about 225 MIPS of processing power and the decode algorithm requiring about 15 MIPS, the CPU will be operating less than 10% of the time. The other 90-95% of the time the CPU will be in a standby mode that requires only milliamps of current. Alternatively, the CPU can be run at a slower clock speed, which is usually an option provided by most of today CPUs, such as the AMD's Athlon CPU. Similarly the HDD is accessed during the time it takes to fill or refill the RAM. Thus, since the average song takes about 4 minutes to play and the RAM holds about 30 songs for 120 Mbytes, and since the HDD needs 1-5 seconds to spin up and only several seconds to load the song play list into RAM, the total access time for the HDD may be 30 seconds out of 120 minutes of play time; a ratio of 1:240, less than 0.5% of full power operating time. These factors add to the power savings gained by using the mini-OS of the present invention instead of the full operating system of the portable computer. The result of the overall power consumption of the present invention is very low when the portable computer is in the music play mode, and that directly translates into the battery maintaining a useful charge level for a much longer time than allowed by the prior art. As those skilled in the art will recognize, the compressed music data of this invention may reside on a hard disk, on other magnetic (e.g., tape) media, optical (e.g., CD-ROM) media, flash media (e.g., SD cards, MMC, memory stick, SMC), or any other storage medium.

Du merely teaches, at paragraphs 37 and 38, that the mini-OS power saving software **minimizes power usage** by **managing the various devices.** The devices including a CPU, and the MP3 storage devices such as CD, HDD, and so on, while maintaining the rest of the system, including the memory, corelogic chipsets, in a fully on and functional state.

A general recitation of minimizing power usage via the management of device components is different from the more granular teaching of a specific energy calculation for the playback of the media title to the end in relation to available battery life based on **playback control information** and an **energy consumption model**, as recited in the independent claims.

Specifically, it is submitted that Du does not teach, at par. 38 –

*means for calculating energy required for playback of the media title to the end in relation to the available battery energy,……, the calculation means (4) being arranged for calculating said required energy depending on the playback control information (5) and an energy consumption model of the device, wherein the energy consumption model incorporates at least an average energy consumption of the memory unit and a display unit per unit of time or file size.*

## II. Energy Consumption Model

In the Office Action, the Examiner admits that Du does not teach an energy consumption model incorporating at least an average energy consumption of the memory unit and a display unit per unit of time or file size, as recited in the independent claims. However, the Examiner cites Dunsten for allegedly remedying this deficiency in Du.

Specifically, the Examiner asserts that Dunsten allegedly teaches an energy consumption model and refers Applicants attention to Col. 2, lines 13-18 of Dunston in support.

Dunston, at Col. 2, lines 13-18, teaches a method for measuring **suspend-time power consumption** in a battery-powered device based on factual data and predictive data. The factual data comprising measured data (e.g., temperature, voltage) and the predictive data comprising data based on the battery's present state and characteristics, such as the battery's remaining life at present rate drain. Dunston recites that "….where the battery is equipped with an internal clock, such predictive data may be presented as a rolling average over a fixed time interval."

It is respectfully submitted that the factual and predictive data of Dunston do not teach the claim recitation of

*calculating the required energy depending on the playback control information (5) and an energy consumption model of the device, wherein the energy consumption model incorporates at least an average energy consumption of the memory unit and a display unit per unit of time or file size.*

The acquisition of factual and predictive data for use by a power management system for measuring suspend time power consumption, as taught in Dunston, is different from calculating required energy based in part on an energy consumption model which incorporates at least an average energy consumption of the memory unit and a display unit per unit of time or file size, as recited in the independent claims.

First, in contrast to Dunston, the method of the invention is not directed to suspend-time power consumption. The invention is instead directed to power consumption in an operable state. Secondly, the energy calculation takes into account the energy consumption characteristics of two specific device components for the purpose of determining whether a highly specific function of playing back a long media title can be performed. In particular, the calculation considers the particular energy consumption characteristics of the memory unit and display unit per unit of time or file size. These two components are critical components for determining the playback device's ability to play back a long media title to the end. The factual and predictive data collected by Dunston will not be sufficient in making such a determination. Moreover, Dunston does not teach or suggest taking into consideration, the particular component energy consumption characteristics per unit of time or file size of specific device components in the construction of an energy consumption **model**.

It is therefore respectfully submitted that at least the limitations and/or features of independent Claims 1 and 11 are believed to be patentably distinct over Du and Dunston in any reasonable combination. Therefore, reconsideration and withdrawal of the rejection is respectfully requested and allowance of claims 1 and 11 is respectfully requested.

Claims 2, 5, and 9-10 depend from independent claim 1 and claim 12 depends from claim 11 and therefore contain the limitations of claim 1 and 11, respectively and

are believed to be in condition for allowance for at least the same reasons given for claims 1 and 11 above.

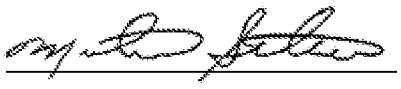
Accordingly, withdrawal of the rejection under 35 U.S.C. §103(a) and allowance of Claims 1-12 is respectfully requested.

## Conclusion

In view of the foregoing amendments and remarks, it is respectfully submitted that all claims presently pending in the application, namely, Claims 1-12 are believed to be in condition for allowance and patentably distinguishable over the art of record.

If the Examiner should have any questions concerning this communication or feels that an interview would be helpful, the Examiner is requested to call Mr. Mike Belk, Intellectual Property Counsel, Philips Electronics North America, at 914-945-9643.

Respectfully submitted,



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